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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,820	08/09/2001	Robert D. Juncosa	266/218	6843

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EXAMINER

FORMAN, BETTY J

ART UNIT

PAPER NUMBER

1634

DATE MAILED: 03/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,820

Applicant(s)

JUNCOSA ET AL.

Examiner

BJ Forman

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-33 is/are pending in the application.
- 4a) Of the above claim(s) 19-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. Applicant's election without traverse of Group III, Claims 27-33, filed 7 December 2001 in Paper No. 3 is acknowledged. Applicant's cancellation of Claims 1-18 in Paper No. 4 filed 7 January 2002 is acknowledged. Claims 19-26 are withdrawn from prosecution. Claims 27-33 are discussed below.

The examiner's Art Unit has changed from 1655 to 1634. Please address correspondence to Art Unit 1634.

Specification

2. Applicant's substitute Abstract filed 7 January 2002 in Paper No. 4 is acknowledged and has been entered.

Priority

3. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)).

4. Applicant's claim for domestic priority under 35 U.S.C. 120 is acknowledged. However, parent applications 08/534,454, filed 09/27/1995, 08/304,657, filed 09/09/1994, 08/271,882, filed 07/07/1994 and 08/146,504, filed 11/01/1993 do not provide adequate support under 35 U.S.C. 112 for claims 27-33 of this application. Specifically, the above parent applications do not provide support for the instantly claimed methods for optically

examining a microlocation by illuminating the microlocation through a scanning confocal microscope. Parent application 08/846,876, filed 05/01/1997 does provide support for the instantly claimed method. Therefore, the effective filing date for instant Claims 27-33 is the filing date of parent application 08/846,876 i.e. 05/01/1997.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 27-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 27-30 are indefinite in Claim 27 because the claim is drawn to a method of optically examining a microlocation, but the claim does not recite method steps of examination. Therefore the claims are indefinite because it is unclear whether the method accomplishes the claimed examination. It is suggested that Claim 27 be amended to accomplish the method e.g. at the end of the claim, insert "to thereby examine said microlocation".

Claims 27-30 are indefinite in Claim 27, line 8 for the recitation "a microlocation" because it is unclear whether the microlocation is the same or different from microlocations recited in the previous steps. It is suggested that Claim 27 be amended to clarify e.g. replace "a" with "said".

Claim 28 is indefinite for the recitation "the microlocation patterns" because the recitation lacks proper antecedent basis in the claim. It is suggested that Claim 28 be amended to provide proper antecedent basis e.g. replace "patterns" with "position".

Claims 31 and 32 are indefinite in Claim 30 because the claim is drawn to a method for examining an object, but the claim does not recite method steps of examination. Therefore the claims are indefinite because it is unclear whether the method accomplishes the claimed examination. It is suggested that Claim 31 be amended to accomplish the claimed method e.g. at the end of the claim insert "illuminating subsequent microlocations to thereby examine the object having multiple microlocations".

Claim 32 is indefinite for the recitation "method of claim 31 for alignment of an object" because the recitation lacks proper antecedent basis in Claim 31 which is drawn to a method for examining an object. It is suggested that Claim 32 be amended to provide proper antecedent basis e.g. replace "alignment of" with "examining".

Claim 32 is indefinite for the recitation "the multiple points of detection" because the recitation lacks proper antecedent basis in Claim 31. It is suggested that the claims be amended to provide proper antecedent basis e.g. in Claim 31, line 4, after "detecting reflected radiation from" insert "multiple points of detection" **OR** in Claim 32, before "multiple points" delete "the" and after "multiple points of detection" insert "are detected from the object to be examined and".

Claim 33 is indefinite because the claim is drawn to a method for determining fluorescence intensity from multiple microlocations but the claim does not recite method steps for determining fluorescence intensity. Method claims need not recite all operating details but should at least recite positive, active steps so that the claims will set out and circumscribe a particular area with a reasonable degree of precision and particularity and make clear what subject matter the claims encompass as well as make clear the subject matter from which others would be precluded. *Ex parte Erlich*, 3 USPQ2d 1011 at 6. It is suggested that Claim 33 be amended to recite positive and active method steps for determining fluorescence intensity e.g. detecting fluorescence, measuring fluorescence and determining intensity.

Claim 33 is indefinite in lines 4-5 for the recitation "scanning the surface of the diagnostic system which includes the microlocations" because it is unclear whether the "scanning" or the "surface" or the "diagnostic system" includes the microlocations. It is suggested that Claim 33 be amended to clarify e.g. replace "which includes" with "said surface having disposed thereon"

Claim 33 is indefinite in lines 10 and 11 for the recitation "the microlocation" because it is unclear whether "the microlocation" is referring to the "one microlocation" of line 9. It is suggested that Claim 33 be amended to clarify e.g. replace "the" with "said one".

Claim 33 is indefinite in lines 12-13 for the recitation "the detector" because the recitation lacks proper antecedent basis in the claim. It is suggested that the claim be amended to provide proper antecedent basis e.g. in line 7, after "detecting light reflected from the microlocations" insert "with a detector".

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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8. Claims 27-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Stern et al (U.S. Patent No. 5,631,734, filed 10 February 1994).

Regarding Claim 27, Stern et al disclose a method for optically examining a microlocation on an object comprising: illuminating at least a portion of the object by scanning light from a source through a scanning confocal microscope onto the object and detecting light reflected from the object; determining the position of the microlocation by analyzing the detected reflected light (i.e. focusing, Claims 13-14); illuminating a microlocation with light from the source through the scanning confocal microscope utilizing the determined (i.e. focused) position of the microlocation; and detecting emitted radiation from the microlocation (Column 1, line 63-Column 2, line 13 and Claims 9-14).

Regarding Claim 28, Stern et al disclose the method wherein the step of determining the position of the microlocation includes use of information regarding the microlocation patterns. Stern disclose that the substrate is mounted on a computer-controlled x-y-z translation stage wherein positioning (i.e. focusing) is performed by adjusting the translation stage (i.e. focusing uses information regarding x-y-z position) (Column 5, lines 26-33). Additionally, Stern disclose that a position of each corner is interpolated to determine the position of the microlocation (i.e. focusing uses information regarding the microlocation relative to the corners) (Claim 18).

Regarding Claim 29, Stern et al disclose the method wherein the step of illuminating the microlocation illuminates no more than a single microlocation i.e. a first region of the substrate is illuminated (Claim 9, Column 18, line 26) wherein a region is substantially smaller than feature area (i.e. microlocation)(Column 15, lines 34-36).

Regarding Claim 30, Stern et al disclose the method wherein the step of detecting emitted radiation is subject to a field of view restricted to a microlocation i.e. only light reflected from the point of focus is detected while out-of-focus light is blocked (Column 6, lines 53-56).

Regarding Claim 31, Stern et al disclose a method for examining an object having multiple microlocations separated by interstitial areas (i.e. microarray having multiple and separate sites, Column 4, lines 18-29) comprising: illuminating the substrate which contains multiple points; detecting reflected radiation from the object; comparing the information constituting reflected radiation with information regarding the structure of the object (i.e. the focused position of each corner, Claim 18); and determining one microlocation through a confocal microscope based upon the position information (Claims 9-14).

Regarding Claim 32, Stern et al disclose the method of Claim 31 wherein the multiple points of detection are gathered by scanning the radiation over at least two microlocations and one interstitial area. Specifically the steps of exciting and detecting are repeated until all regions on the substrate have been detected (Claim 9, Column 18, lines 36-38) wherein the substrate comprises multiple and separate sites (Column 4, lines 18-29).

Regarding Claim 33, Stern et al disclose a method for determining fluorescence intensity from multiple microlocations disposed on the surface of a biological diagnostic system (i.e. microarray, Column 4, lines 18-29) comprising: scanning the surface of the diagnostic system with a laser source directed through a scanning confocal optical system (Column 5, lines 34-43); detecting light from the microlocations; determining the position of the microlocations by imagining reflected light (i.e. focusing); illuminating one microlocation through the confocal optical system based upon the determined position; and detecting from the microlocation where the detector masks emission from the object in regions other than the one microlocation i.e. the confocal pinhole transmits light reflected only from the microlocation and other light is blocked (i.e. masked) (Column 6, lines 53-58 and Claims 9-14) wherein the illumination does not extend substantially beyond the microlocation (Column 15, lines 34-36) and wherein fluorescence intensity from the multiple microlocations is determined (Column 15, lines 25-30).

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Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Trulson et al (U.S. Patent No. 5,578,832, filed 2 September 1994) teach a method for optically examining a microlocation comprising illuminating a substrate using a scanning confocal microscope and determining the position of the microlocation (Claim 14).


Conclusion

10. No claim is allowed.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (703) 306-5878. The examiner can normally be reached on 6:30 TO 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones can be reached on (703) 308-1152. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-8724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.


BJ Forman, Ph.D.
Patent Examiner
Art Unit: 1634
March 1, 2002